REMARKS

Dealing with preliminary matters first, Applicants thank the Examiner for acknowledging Applicants' claim to priority and receipt of the priority document. Furthermore, Applicants thank the Examiner for considering the references cited in an Information Disclosure Statement filed on June 15, 2004, as was evidenced by the returned initialized PTO/SB 08 A & B.

Claims 1-10 are all the claims pending in the application. Of these claims, Claims 1, 3, 6 and 7 are rejected under § 102 as being anticipated by Casiraghi (U.S. Patent No. 6,278,825 B1). Further claims 2, 4, 5 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Casiraghi in view of WO/9703124A1 (Rogestedt). Finally, claims 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Casiraghi in view of Camberlin (U.S. Patent No. 6,015,859). By way of this amendment, Applicants have cancelled claims 7-10. However, Applicants respectfully traverse the prior art rejections of the remaining claims.

With reference to Fig. 1, the present application describes an optical fiber cable comprising at least one central strength member (22) surrounded by optical fibers (23), an electrical conductor (24), an insulative layer (25), an armor layer (26) and an external protection coating (27).

The layer of an insulative composition comprises mainly a mixture of polymers comprising at least one high density polymer and one low density polymer having a lower viscosity than the high density polymer.

The advantage of using such a mixture is that the risk for breakdown, when the material is subjected to high electrical fields, significantly improves. This advantage is described in the present application by means of example in paragraph [0040] and Fig. 5.

Fig. 5 shows breakdown probability of a test sample of material when an electrical field is applied. The results are presented in the well known Weibull format. From the graph it is clear that a polymer mixture, according to the present invention, shows improved breakdown performance over reference material. A hypothesis for the cause of this unexpected advantage is described in paragraph [0045].

The Examiner rejects claims 1, 3, 6 and 7 under 35 U.S.C. § 102(b), as being anticipated by Casiraghi. Applicants respectfully traverse this rejection for the following reasons.

Casiraghi teaches an optical fiber cable (Fig. 1) comprising an optical core (1), an inner sheath (2) made of polymer material, an armor layer (3) and an outer sheath (4). Outer sheath (4) comprises a first inner layer (4a) substantially devoid of tracking resistance and a second outer layer (4b) having high tracking resistance. The tracking resistance property, as explained in column 2, lines 57-65 and column 3, lines 1-7, is comparable with the resistance to breakdown upon high electrical fields as described in the present application.

Applicants respectfully submit that in light of the present application, Casiraghi does not teach a fiber optic cable comprising a metallic conductor surrounding an optical fiber. Therefore claim 1 is novel over Casiraghi.

Secondly, in the present invention, the insulating layer (25) is positioned on the inside of armor layer (26). As far as a direct comparison, is justified, the corresponding layer in Casiraghi

is therefore inner sheath (2). Inner sheath (2) does not comprise mainly a mixture of polymers as recited in present claim 1. Instead, the material composition of inner sheath (2) is low-density polyethylene filled with carbon block or polyurethane (column 3, lines 13-14). This is another distinction of claim 1 over Casiraghi.

Finally, the tracking resistance layer as defined in Casiraghi is outer layer (4b). The specific tracking resistance is obtained by adding to the polymer matrix a predetermined quantity of an inorganic oxide, preferably in a hydrated or hydroxide form (column 3, line 65 to column 4, line 11). In column 4, lines 25-48, Casiraghi further teaches, that the polymer matrix is preferably the same for the inner layer (4a) and the outer layer (4b). Because the inner layer (4a) is devoid of tracking resistance, Casiraghi implicitly does not teach that a polymer mixture will result in an improved tracking resistance.

Applicants respectfully submit that Casiraghi cannot anticipate claim 1.

The Examiner further rejects claims 2, 4, 5 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Casiraghi in view of Rogestedt. Applicants submit that Rogestedt does not compensate for the deficiencies discussed above in regard to Casiraghi.

The present application already acknowledges Rogestedt in paragraph [0011].

Rogestedt teaches (page 2, lines 8-16) a multimodal olefin polymer mixture comprising a first polymer (a) having a high density (0.930 - 0.975 g/cm^3) and high Melt Flow Rate (50-2000 g/10min) and a second polymer (b) having a low density (0.88 - 0.93 g/cm^3) and a low Melt Flow Rate (0.1 - 0.8 g/10min).

In contrast to claim 1, Rogestedt thus teaches a polymer mixture comprising a first polymer having high density and low viscosity and a second polymer having low density and high viscosity.

The advantage of using the mixture, according to Rogestedt is that both the ESCR (Environmental Stress Cracking Resistance, page 3, lines 8-14 of Rogestedt) and shrinkage at a given processability are improved. (*See*, page 1, to page 2, line 7).

Rogestedt does not mention a mixture of polymers as recited in claim 1.

Although Rogestedt mentions (page 1, lines 1-8) the use of said mixture in cables transporting electrical power, there is no indication that the mixture would show improved cable breakdown resistance when high electrical fields are applied.

Hence, even if Casiraghi was combined with Rogestedt, a person of ordinary skill in the art would not arrive at the invention recited in the claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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